baby was washed and dressed before it was removed from the tent, which had an average temperature of 100 degrees F.

Supplemental feeding was started four hours following delivery, and all unnecessary handling of baby was eliminated, and all charts revealed an increase of weight during the first week.

During the past two years I have been feeding new-born babies 60 calories per kilogram of skimmed milk and dextro-maltose, four hours following delivery, and feel very much encouraged by this routine.

I am satisfied that the supplemental feeding that has been outlined by Happ is the proper procedure in retaining and increasing the weight curve in new-born babies.

VICTOR E. STORK, M. D. (Medical Office Building, Los Angeles)—The data, logic, and conclusions presented by Dr. Happ in this paper seemed to me perfectly sane, and in general they are in line with our present practice in infant-feeding.

One point, I believe, should have special emphasis, and at the same time slight modification. The point to be emphasized is that it is neither necessary nor desirable to prevent the initial loss in normal, full-term, well-nourished babies, by giving supplementary food. I know of no evidence to show that this type of baby suffers any ill after-effects from this initial loss in weight.

When one gives any sort of supplementary food to a new-born infant, the breast milk supply of that infant is put in jeopardy. It will be more difficult in that case to establish and maintain an adequate breast milk supply. The weaning process has been started. This is the real reason for avoiding supplementary feeding when it is possible to do so. This effect of extra food in diminishing the breast milk supply constitutes the danger which Happ has himself pointed out in another article on "The Feeding of New Born Infants," in the November number of Better Health.

When it is realized that the smaller, more feeble, or premature infants, constitute the very group which should, above all, receive an adequate amount of breast milk, it becomes obvious that considerable discrimination is necessary in choosing the infants who appear to need supplementary feeding.

Dr. Happ does not say whether he is usually able to discontinue the supplementary feedings after one or two weeks and establish an adequate breast milk supply. There is usually considerable difficulty in getting away from the bottle once it is started. So many small babies, twins, and even prematures, accept their initial loss in weight and do well later on exclusive breast-feeding, that I should be inclined to make the indications for giving extra food a little more limited.

When it does seem necessary, however, to prevent trouble by giving extra food, the method of doing this, outlined by Happ, seems entirely desirable.

The Effect of Ultraviolet Rays—The effect of ultraviolet rays on varying concentrations of the follicular hormone has been determined by Edgar Allen and M. M. Ellis, Columbia, Mo. (Journal A. M. A.). It was found that exposure to ultraviolet rays in air destroys both the ovarian hormone and the placental hormone, and further, that the action is on the hormones rather than on the oil used as a solvent. The positive test in a 1:3 dilution of the irradiated extract in the second series and the two indeterminate tests of irradiated residues in the third series indicate that the destruction of these hormones is gradual rather than sudden. This destruction of these hormones by the ultraviolet rays may possibly be associated with some oxidative change, as it is well known that ultraviolet rays promote the oxidation of some substances and also the molecular oxygen is partly transformed by ultraviolet rays into ozone.

Cholecystitis and Cholelithiasis in Young Children—Three cases of gallbladder disease in children under 10 years of age are reported by C. C. Snyder, Pasadena, Calif. (Journal A. M. A.). The children were aged 4, 5½ and 9½ years, respectively. The patients were operated on, and in each case drainage was followed by uneventful recovery. The preoperative diagnosis in these three cases was acute appendicitis.

THE PROSTATE AND ITS INFLUENCE ON LOW-BACK PAIN

By LIONEL P. PLAYER, M. D., *San Francisco*
(From the Department of Urology, University of California)

Until recently writers considered pain in the back due entirely to static conditions, muscle or ligament strain, and nerve involvement, excluding arthritis patients.

Eradicating the focal infection of the prostate and seminal vesicles, as well as the tonsils, teeth, adenoids, appendix, etc., will cure cases of myalgia, myositis, synovitis, and neuritis.

Orthopedic surgeons find in backache associated with prostatitis, x-ray lesions of the pelvic joints in an average of 25 per cent of patients.

One of the most important causes of backache in man is prostatitis. Routine examination of the prostate should be made in all male patients complaining of backache, and, if involved, proper treatment given.

DISCUSSION *by Fraser L. Macpherson, C. P. Mathe, George J. McChesney, H. H. Markel, San Francisco.*

IN CONSIDERING the subject of the prostate and its influence on low-back pain, one must bear in mind the intimate relationship of the prostate and seminal vesicles. I voice the opinion of other investigators when in stating that prostatitis and seminal vesiculitis almost invariably occur together, and so I will consider them as a unit.

Backache is a common complaint, and patients usually seek relief at the hands of the physician or the orthopedic surgeon. If less enlightened, but influenced by glaring advertisements, they may take treatment from an osteopath or chiropractor.

The urologist sees these patients frequently when urological symptoms are uppermost (on many occasions in the clinic particularly, back pain has erroneously been called kidney pain by the patient) and backache not so prominent, but usually in consultation with the family physician or the orthopedic surgeon who is endeavoring to discover a focus of infection which may be the etiological factor in sacro-iliac or lumbo-sacral joint inflammation. I am not assuming that prostatitis is the sole factor in backache, because such localized pain may be the result of foci elsewhere. I am positive that backache does exist, however, when inflammation of the prostate is the only discoverable site of infection.

I am purposely excluding tuberculosis of the spine or genito-urinary system, lues, malignancy, organic nervous diseases, and fractures of the spine or joints under discussion. Acute gonorrhea is also excluded, since in the acute stage this disease shows a predilection for other joints primarily.

In the past three years I have incorporated the question of backache in taking routine urological histories, and this paper is based on one hundred such histories—our findings and treatment in these chronic cases.

It may be well to mention here that female low backache may be due to pyelitis, ureteritis, cystitis, trigonitis, urethritis, urethral stricture, or polypus—exclusive of or with pelvic inflammatory conditions. Treatment directed to such conditions, exclusive of pelvic inflammatory disease, will often relieve backache if they are the only foci existing.

The question of accompanying foci in the sinuses,

teeth, tonsils, is highly important, for, in looking over a large number of histories, it was evident that, unless all possible foci were treated along with prostatitis, improvement was slow and recurrence the rule.

Some authors disregard or fail to mention focal infection as a cause of backache. Others discussed this symptom before focal infection was considered a factor. Robert W. Lovett omits purposely tuberculosis of the spine, organic nervous diseases and spinal fractures in his paper on "Backache and Prostatitis," and considers three etiological possibilities:

1. Disease or displacement of joints.
2. Traumatism to the back.
3. Arthritis of the spine.

He also adds two more classes which cover forty-one out of eighty-three of his cases:

A. Static in origin, due to overstrain of posterior musculature and pain due to irritation of muscles, ligaments, and fasciae.

B. Special strain or relaxation of sacro-iliac joints.

The static A type he says is caused by forward displacement of center of gravity with undue strain on posterior muscles, which causes pain in these muscles and fasciae. As a result of this forward displacement the author admits of strain on sacro-iliac joint, but thinks the pain is in the muscles and fasciae and not in the joint. Lovett refers to Roland O. Meisenbach's article (2), in which this investigator attempts to prove that the sacro-iliac joint is a true joint and reports eighty-four pathological conditions. This paper preceded any work on focal infection. In his cases of sacro-iliac relaxation he classifies the following types: traumatic, general debility, uterine, neurotic. He claims in pregnancy that the sacro-iliac syncondrosis yields and admits motion. He with Dr. Albee proved, by injecting methylene blue in the joints of cadavers, that it is a true joint and has all the anatomical structures, i. e., hyaline cartilage, synovial membrane, and supporting ligaments. One of the chief reasons for relaxation of this joint is that the sacrum may be so pulled out of place in its articulation with the ilium that there is a pressure on the nerves, with resulting sciatica. Also undue forward position of the body with a relaxed joint would keep it pulled out of place and produce pain in that region. If this is taken into consideration, together with focal infections in the pelvic viscera, prostate seminal vesicles, and elsewhere, one can understand why, with a synovitis developed, there would be pain in the sacro-iliac or even the lumbo-sacral joints, especially when one is familiar with the selective action of bacteria as described by Rosenow. Lovett denies that there is any evidence to prove slipping of the sacro-iliac joint or pain caused by this joint condition either with the x-ray, by palpation, or post mortem, as described by Meisenbach. He says: "In my series of eighty-three cases I have failed to find evidence of slipping, displacement, or abnormal motion." He lays stress on the static A theory with defective antero-posterior balance. Of backache of pelvic origin, he says: "In general, pelvic backache is sacral but may be dorsal, and is generally associated with symptoms pointing to pelvic disturbance." He still adheres to his pet theory that even pelvic backache is caused by forward bent position above mentioned. He accedes to the traumatic type (2), and regarding the arthritic type (3) he considers nerve-root pressure, mentioning stiffness and lateral deviation of the spine, and x-ray evidence of the presence of osteophytes in the vertebrae, and lipping of the vertebrae edges. With such x-ray evidence today we seek a focus of infection and consider the rest of it postural.

Frank Billings, besides mentioning the mouth, faucial tonsils, and sinuses as sites of chronic focal infection, also mentions the prostate, seminal vesicles, and female genitalia. The bacteria he cultured were streptococcus viridans, and streptococcus hemolyticus pyogenes. He quotes Rosenow, who found that the principal types of infection in the joints, etc., were those that occupy a position between streptococcus viridans and streptococcus hemolyticus. They are more virulent than the former and less virulent than the latter. Injected into rabbits they produce arthritis, endocarditis, myocarditis, and pericarditis. He advises the removal of all sources of infection, and mentions especially treatment of the prostate gland and seminal vesicles. He recommends autogenous vaccine and vasotomy to drain and wash out the seminal vesicles. Hugh Young calls attention to the limited recognition of the genito-urinary tract as a focal site in many vague pains. He lays especial emphasis on the fact that chronic diseases in this tract may exist for years without symptoms, but such infections, with their toxins in the prostate and seminal vesicles, irritate the nerve terminals of these organs, sending stimuli to other viscera and superficial regions, according to the dicta laid down by Head. He says, "I have often seen cases of lumbago, sciatica, vague pains in hips, thighs, perineum, groin, and as far as the sole of the feet, due to it," and recommends in extreme cases, perineal prostatectomy as a means of relief. He also quotes Fuller's article on seminal vesiculotomy, with report of cases and 50 per cent cures in arthritis. Brandsford Lewis, in discussing Young's paper, brings out the following points: Ninety per cent acute anterior urethritis cases become posterior, and mentions Young's operation in extreme cases. Gotlieb brings out the fact that the subject of chronic backache is casually mentioned in some textbooks. He quotes Keys: "Pain in the back in these cases is usually in the upper sacral region; it is a constant aching in character, uninfluenced by urination." Pearson: "Spondylo-arthritis is not an uncommon complication of gonorrheal diseases of the joints, and the sacro-iliac joint is involved sometimes." Guiteras mentions the possibility of gonorrheal arthritis of the sacro-iliac and inter-vertebral joints. Billings, Rosenow, and Adami state that the prostate and seminal vesicles are important sites of chronic infection. Gotlieb advises the proper fitting of shoes, correction of faulty statics, and treatment of the prostate for backache. Arthur P. Luff describes a condition which he terms fibrositis of various organs of the body. He mentions tonsillitis, pharyngitis, and absorption of toxins, but does not mention the pelvic organs. A. H. Swartz made cul-

tures in twenty cases of prostatitis. In 65 per cent the streptothrix was demonstrated either in pure culture or mixed with staphylococci. He made infected vaccines which gave good results in all but three cases, which required prostatic massage along with the vaccine. L. P. Player and C. P. Mathé, in a study of tumors of the vesicle neck and prostatic urethra and their relation to prostatitis, found that backache was a symptom in fifty-two of sixty-eight cases. Moses Behrend lists every cause of backache, with the exception of focal infection, in the pelvis. J. R. Caulk and H. G. Greditzer studied 300 cases of prostatitis and seminal vesiculitis; in 203 or 67.66 per cent of these cases they found referred pains or aches in the back (lumbago), legs and hips (sciatica), suprapubic region, groin, perineum, testicles, scrotum, penis, urethra, and kidneys. Of all these, however, lumbago and sciatica were most frequently mentioned. They regret the fact that the prostate and seminal vesicles are so frequently overlooked by the general practitioner as a possible source of infection and absorption of toxins in the production of vague and referred aches and pains, and say: "It is with this class of referred pains that our best results have often been obtained." Edward C. Rosenow and Winifred Ashby took material from infected foci in the human suffering with myalgia, myositis, arthritis, and periarthritis in one of their experimental groups and injected sixty-one animals; 79 per cent developed myositis and arthritis, 26 per cent had turbid fluid in the joints, none developed lesions in the nerves. In another group a small percentage did develop lesions in the nerves.

In a previous paper, Player, Lee-Brown, and Mathé published a table showing the results of cultures obtained from sterile secretions obtained from the posterior urethra taken directly from the prostate and ejaculatory ducts by a special instrument. The following is the table, and bears a close relationship to the findings of Frank Billings, who collected streptococcus viridans and streptococcus hemolyticus from the prostate and seminal vesicles. Rosenow found that the principal types of infection in the joints were those that occupied a position between the streptococcus viridans and the streptococcus hemolyticus. Why, then, should not prostates and seminal vesicles play a very important part in backache?

TABLE I

Sterile	57
B. Coli	24
Staphylococcus albus	2
Diphtheroids	5
Extracellular diplococcus (gram positive)	2
Staphylococcus } B. Coli }	5
Streptococcus hemolyticus	2
Non-hemolytic streptococcus	1
Streptococcus hemolyticus } B. Coli }	13
Staphylococcus albus } Non-hemolytic streptococcus } B. Coli }	4
B. Proteus }	1
Micrococcus catarrhalis	2
Total	118

In a survey of 500 private and clinical urological histories, 60 per cent, or 300 cases, complained of pain in the back as an outstanding symptom. In 100 of these, taken at random, prostatitis and seminal vesiculitis were present in eighty instances. Of the eighty, sixty-one admitted gonorrheal infection, four were or had been chronic masturbaters, six had indulged in sexual excesses and were alcoholics. Three had been operated for hemorrhoids or fissures. The remaining six could attribute no cause. It is interesting to note that, in this group of cases, eight had been perfectly well until an attack of influenza; four had furunculosis; others blamed exposure to cold, overexercise, or strain. One had inserted wax tapers into the urethra and infected his bladder, urethra, and prostate. Other foci were present in fifty of this group of cases; the teeth were the disturbing element in thirty instances; infected tonsils, sinuses, and anal conditions were found in the remaining twenty. In the presence of other foci, prostatitis, and particularly seminal vesiculitis, is prone to recur, which fact emphasizes the importance of clearing up all focal infections. In the absence of foci elsewhere, the result of treatment of prostatitis and its influence on the back pain is quite gratifying, although, as a rule, patience on the part of the surgeon and the patients both is quite essential. Gradual improvement without recurrence of pain is not the rule. The secretions will show practically no pus at times and the pain be more pronounced. Conversely, the patient will be free of pain and secretions show more pus. When one remembers the histological structure of the prostate and seminal vesicles, the difficulty of emptying the numerous small abscessed acini by massage, the difficulty to effect a cure may be readily understood. The following table, No. 2, will assist in simplifying the findings in our 100 cases with backache as a pronounced symptom.

The other signs and symptoms in prostatitis and seminal vesiculitis are: shreds in the urine, moisture or watery discharge in the meatus, perineal discomfort, suprapubic pain, backache, arthritis, impotentia, sexual weakness, painful nocturnal erections, mental depression, neuroses, premature and painful ejaculation.

An analysis of the above table reveals the following data: Backache was most common in the third and fourth decades of life. Fifty-seven and three-tenths per cent of this group had only one gonorrheal infection. The onset of backache occurs most frequently between one and two years and two and four years following the last gonorrheal infection. Diagnosis in 70 per cent was prostatitis, seminal vesiculitis, and littritis. Urethral strictures, slight in extent or well developed, comprised 35 per cent. Urethral polypi or expressences occurred in 30 per cent. Urethritis and trigonitis are not constantly present, but do occur during the disease. Referred pains in joints were complained of as follows: Sacro-iliac, 30; lumbo-sacra, 20; sacro-iliac, lumbo-sacral, and hip, 41; shoulders, 4; knee, foot, wrist, elbow, ankle, 5. Wassermann test was positive in twenty-two cases. By massaging the glands of Littre on a urethral sound, gonococci were found within twenty-four hours in stained smears in seven cases. In one of these seven gonorrhea had been denied. Of the one hundred cases under consideration, seventy-five took treatment, thirteen requested diagnosis only, and twelve did not continue treatment after a few weeks. (Read off duration of treatment in Table II.)

There is one point in particular worthy of em-

TABLE II

Age	Gonoccus Number of Infections	Onset Present Illness Following Last Neisser Infection	Diagnosis	Referred Pains	Treatment Kinds	Duration
Under 20 years 13	One attack 5	Under 1 month 0	Prostatitis, vesiculitis (seminal) 70	Sacro-iliac 30	Massage, stripping, dilatation, Vaccine, Anterior instillation 27	Three months 10
Between 20 and 30 years 18	Two attacks 15	Between 1 and 6 months 5	Prostatitis, seminal vesiculitis and littritis 30	Lumbo-sacral 20	Vas injection 5	Between 3 months and 6 months 30
Between 30 and 40 years 38	Three attacks 5	Between 6 months and 1 year 8	Strictures P. S.—V. and L. 35%	S.-I. L.-S. and hip 41	Came for diagnosis only 13	Between 6 months and 1 year 19
Between 40 and 50 years 25	Four attacks 5	Between 1 and 2 years 18	Polypi 30%	Shoulder joint 4	Treated only a few weeks 12	Between 1 and 2 years 7
Over 50 years 6	Had more than four attacks 4	Between 2 and 4 years 20	Urethritis and trigonitis occur to a greater or less extent in all cases.	Sacro-iliac knee, feet, wrist, elbow 5	Autogenous vaccines 30	Between 2 and 3 years 2
		Between 4 and 8 years 6	Epididymitis 10%	Pressure Sitting and arising 35%		Over 3 years 7
		Over 8 years 4	Arthritis in acute Neisser 4			

Results: The treatment of prostatitis alone when all other foci have been attended to is of prolonged duration, anywhere from three months to three years being the time allotted in my series of cases; the average case will clear up within a year. The influence of elimination of all foci on the backache is in proportion to the degree of infection remaining. Orthopedic care of static conditions and correction of faulty posture and shoes are essential to good results.

phasis in making routine examination of prostate and seminal vesicles as a possible focus of infection. No one can palpate a prostate per rectum and tell definitely from its size, shape, and consistency whether or not infection is present. It is often necessary to massage the prostate and strip the vesicles from one to four times on consecutive days before the secretion will show in its true light.

Early in this article I mentioned that a great many patients complaining of backache and with prostatic and seminal vesicular involvement first seek aid of the orthopedic surgeon. In order to obtain definite data on the percentage of such cases I sent questionnaires to the orthopedic surgeons of the state, containing two questions: 1. "In what percentage of patients complaining of pain in the back associated with prostatitis do you find x-ray pathology in the lumbo-sacral and sacro-iliac joints?" 2. "In what percentage of patients complaining of pain in the back do you find prostatitis?" I have received sixteen replies. I may divide these answers into two classes: First, those who have definite figures at hand and can answer the questions in terms of percentages, and second, those who, though giving an affirmative answer to both questions, are unable to investigate their case histories in order to obtain the exact data and give definite figures. In the latter class: A admits percentage in questions 1 and 2, but has not completed his card index system and cannot give exact figures. B admits a certain percentage in questions 1 and 2, but impossible to give exact figures. C admits a certain percentage of cases in answer to both questions, but does not know the figures. D: "I cannot give the percentage, but do not think it to be very large." E: "I do not see enough patients complaining of pain in the back associated with prostatitis to give a helpful answer in terms of percentage." F: "Have no figures of any value." G: "Have not had any cases of prostatitis referred to me with back pain." H, answering No. 1, says: "In chronic cases practically all." Answering question 2, "I am unable to say, but a small per cent." I, answering question 1, "I do not know." Answering question 2, "A small percentage." Now I have just presented the answers from nine correspondents, and they present no definite figures. From seven other orthopedic surgeons who have definite percentages to offer, I received the following data:

1. Answer to question 1—5 per cent.
   " " " 2—10 to 15 per cent.
2. " " " 1—10 to 20 per cent.
   " " " 2—20 per cent.
3. " " " 1—Has no statistics.
   " " " 2—30 per cent.
4. " " " 1—Between 30 and 40 per cent.
   " " " 2—Not over 10 per cent.
5. " " " 1—30 per cent.
   " " " 2—30 per cent.
*6. " " " 1—50 per cent.
   " " " 2—60 per cent.
*7. " " " 1—25 to 50 per cent.
   " " " 2—50 to 75 per cent.

To sum up these answers I note that all of the sixteen representative orthopedic surgeons of this state admit they find x-ray pathology in the lumbo-

*Data taken from histories in both clinic and private patients after careful survey.

sacral and sacro-iliac joints in patients complaining of pain in the back associated with prostatitis. Also in patients complaining of pain in the back they find various percentages of them suffering with prostatitis. Nine of the doctors do not offer any definite figures, whereas seven give definite percentages to both questions. To the six answers in question 1 of this group, I find that the average is 28 per cent, or, in other words, that among thousands of cases treated by these orthopedic surgeons they find among the prostatics with pain in the back definite x-ray lesions of the lumbo-sacral and sacro-iliac joints in twenty-eight out of every one hundred cases. The seven answers to question 2 of this group averaged 32 per cent, which means that, of patients complaining of pain in the back, thirty-two out of every one hundred have prostatitis. Though the average percentage in the answers to questions 1 and 2 are 28 and 32 per cent, respectively, yet I note that some of the surgeons report much higher figures, from 50 per cent to even 75 per cent. These percentages of joint affections with prostatitis are remarkable when we take into consideration the fact, following the researches of Rosenow, that the selective action of the various types of streptococci emanating from the various foci of infection may have a predilection for the tendon sheaths, muscles, and joints, and that in very mild involvement of the joints, as well as in even severe infection of the back muscles with their tendons, they may very often show no definite lesions on the x-ray plate. Thus, in many cases there may exist definite involvement of the muscles, tendons, and joints of the back attributable to bacteria from prostatic foci without any demonstrable lesions.

DIAGNOSIS

All patients should have general examination by someone capable, who should refer them to proper specialists. Specialists cannot be efficient in general examination. Our investigation includes: Urine, complete chemical and bacterial examination. With the patient showing definite chronic complications, urine is drawn from the bladder with sterile precautions for culture and inoculation of guinea pigs; careful examinations per rectum and charting of the prostate and seminal vesicles, Cabot test, microscopical, cultural examination of massaged secretions; examination of urethra and bladder with urethroscope and cystoscope, charting the findings if necessary; catheterizing the ureters and taking x-ray pictures of the whole tract, including kidneys, ureters, bladder, and other organs of the pelvis to discover abnormalities.

TREATMENT

Non-surgical—Seventy-five patients were treated in the routine manner by massaging the prostate, stripping the seminal vesicles, sounds, instillations. Five of these received vas injections. Thirty received, in addition to regular treatment, intermuscular injections of autogenous and stock vaccines. The influence of the vaccine on the pus content of the prostate and seminal vesicle secretions was disappointing, but the backache was relieved entirely in approximately 22 per cent. Mixed vaccine rich in gonococci, given during the acute stage of gonorrhea, reduces the percentage of complications in the prostate, seminal vesicles, and epididymi. The majority of these patients were under treatment by the orthopedic and general surgeons for static conditions, painful joints and foot defects, etc. The few cases that were not under the orthopedic care were not relieved of back pain until the secretions were much improved. In our opinion good results in backache with prostatitis depend upon co-operation between consultant, the surgeon handling the case, and the patient. Other factors that influence the results obtained are assurance that the ejaculatory and prostatic ducts are patent, dilation of strictures, emptying and cleaning the glands of Littre, destruction of polypi, eradication of infections and inflammations elsewhere in the genito-urinary tract along with distant foci. The general physical condition of the patient must be considered; hygiene, diet, tonics are indicated in nearly all cases. Injections of various antiseptics intravenously are being tried, with reported good results.

Surgical—Vas injection, according to the dictates of Belfield, and modifications of the same idea are of great assistance in some of the resistant types. Fuller advises in extreme cases seminal vesiculectomy or seminal vesiculotomy, and reports 50 per cent are cured. O. S. Lowsley reports ten surgical cases representing 29.6 per cent, two vesiculotomy, eight vesiculectomy, with good results in three, fair in six, poor in one. Young advises his perineal prostatectomy. In the five cases in which we performed vas injection, good results were obtained in four. The other cases did not respond. His arthritis is growing steadily worse and will probably require radical operation.

The onset of backache occurs most frequently between one and two years and two and four years following gonorrheal infection. Diagnosis in 70 per cent of cases was prostatitis and seminal vesiculitis; in 30 per cent prostatitis, seminal vesiculitis, and littritis. Urethral strictures, either slight or well developed, in 35 per cent; polypi, polypoid masses, and excrescences occurred in 30 per cent; urethritis and trigonitis existed at intervals during the disease.

I wish to express my thanks to Dr. Redewell of the University of California for his assistance in preparing abstracts.

SUMMARY

1. Until recently writers considered pain in the back due entirely to static conditions, muscle or ligament strain, and nerve involvement—excluding arthritis patients.

2. Rosenow and his followers have shown that bacteria from foci of infection have selective action and the different types produce myositis, myalgia, synovitis, and arthritis.

3. Eradicating the focal infection of the prostate and seminal vesicles, as well as the tonsils, teeth, adenoids, appendix, etc., will cure cases of myalgia, myositis, synovitis, and neuritis.

4. We have in prostatitis analogous organisms to those reported by Rosenow in other foci.

5. Orthopedic surgeons find in backache associated with prostatitis, x-ray lesions of the pelvic joints in an average of 25 per cent of patients.

6. Only by taking complete histories and making careful diagnoses can prostatitis patients with backache be properly treated.

7. In treating prostatitis all contiguous organs must be carefully looked after, in order to eradicate all possible foci of infection, i. e.: seminal vesicles, bladder, kidneys, ureters, vas deferentia, epididymii, urethra.

8. One of the most important causes of backache in man is prostatitis. Routine examination of the prostate should be made in all male patients complaining of backache, and, if involved, proper treatment given.

9. There is no specific cure for chronic prostatitis, and the fact that it takes from months to years of careful treatment to eradicate inflammation in that gland, we must believe that when we find such inflammation the cause of backache in so many patients, full relief will come only with co-operation between that wonderful bulwark of medicine, the general practitioner, the general and orthopedic surgeon, the urologist, and last, but most important of all, the patient himself.

380 Post Street.

DISCUSSION

FRASER L. MACPHERSON, M. D. (380 Post Street, San Francisco)—Dr. Player's paper is of extreme interest to me because I have had an opportunity to follow some of his patients from an orthopedic standpoint.

It is remarkable how fast low-back pain associated with prostatitis will clear up under urological treatment. One can usually be suspicious of a prostatitis if a patient complains of low-back pain not associated with any definite history of injury and on examination shows no list and refers pain to sacrum. Patients that do give a history of an injury and fail to get relief from good orthopedic treatment will usually be found to have a prostatitis. This is often true of many industrial cases which drag on indefinitely.

Prostatic examination is too often neglected by the profession because of its disagreeable feature. Even if it is done one is apt to be satisfied with one massage. As Dr. Player mentioned, it is necessary to massage three or four times on consecutive days in order to determine a prostatitis. Many doctors are willing to take a patient's denial of a Neisser rather than make an examination. These cases are the ones that usually show an infection, although many are non-specific in nature.

It should be a rule in every case of low-back pain showing x-ray changes to examine the prostate, just as we routinely examine the teeth and tonsils.

Having eliminated the prostate, teeth, and tonsils as foci of infection, the co-operation of the orthopedist is necessary to correct static faults, such as poor posture, short achilles, pronated feet, and weak musculature, in order to relieve a joint that has been injured through disease as well as strain.

C. P. MATHE, M. D. (Phelan Building, San Francisco)—Dr. Player emphasizes the fact that in 500 cases of prostatitis, 60 per cent complained of backache as their outstanding symptom. When sacro-iliac, lumbo-sacral, or hip pain is found associated with an urethral morning discharge, prostatitis should be strongly suspected.

In 1921 Player and I reported sixty-eight cases of chronic prostatitis and seminal vesiculitis complicated by polypi of the vesical neck and posterior urethra. In reviewing the sixty-eight cases we found that fifty-seven had pain and discomfort in perineum, fifty-two had dull lumbo-sacral pain (backache), twenty had inguinal pain, thirteen had hypogastric pain, fifty-two had repeated or constant morning drop.

We noted the fact that morning urethral drop occurs as frequently as the lower back pain. When both were present the prostate was found infected in 99 per cent of the cases.

Many cases are overlooked due to an incomplete or incompetent examination of the prostate. The prostate must be examined four times by a competent urologist before a negative report can be reliably given. If no secretion is obtained the prostate should be massaged on a bladder in which sterile water has been introduced, the urine voided, then centrifuged, and examined for pus and organisms.

The co-operation of the patient is necessary in order to obtain relief. He must be assured that the treatment will be of long duration. Player shows that the average uncomplicated case of prostatitis usually clears up in less than a year. The complicated cases require longer time. In those whose resistance is good the length of time is shorter. I have observed that robust athletes clear up rather quickly, whereas 50 per cent of syphilitics show practically no improvement even after years of treatment.

The orthopedist well realized the importance of prostatitis as a possible cause of lower back pain. It is the general practitioner who sees large groups of patients that should be brought to realize that in at least 33 per cent the common complaint causing so much discomfort and suffering can be relieved by a careful examination and treatment of the prostate gland.

GEORGE J. MCCHESNEY, M. D. (Fitzhugh Building, San Francisco)—This article of Dr. Player's is a timely one in that it once more reminds us of the importance of focal infections in spinal arthritis, which we are too prone to neglect. This is shown by the rather sad results of the questionnaire to orthopedic surgeons, those results not being of such accuracy and unanimity as would indicate that the focal liability in prostatitis was receiving the proper attention it should from orthopedists. Personally I confess to being more or less delinquent, and for the following reasons:

As Player states, a proper urological opinion can only be obtained after three or four examinations. This makes an orthopedic surgeon's opinion concerning the prostate just as valueless as an orthopedic opinion on teeth or tonsils, but in the latter instances he can refer the patient to a dentist or a throat specialist and get an opinion as to the liability of focal infection at one interview, whereas in the case of an opinion concerning the prostate, in private practice one might hesitate in sending a patient for rather prolonged urological examination, unless the indications were strong as to the necessity for it.

The temptation is present to shirk one's responsibility, and it seems to me that if a method could be found to obtain a positive urological opinion at one interview it would be of great benefit to all concerned.

Of course, there may be serious cases that are admitted to hospitals where this objection does not qualify.

There can be no argument as to the soundness of Dr. Player's conclusions and the means by which he arrives at them.

H. H. MARKEL, M. D. (380 Post Street, San Francisco)—As presiding officer of this section on orthopedic surgery I was especially glad to hear Doctor Player's results. I am very sure that many, many cases of low backache are caused by prostatitis, and many cases of injury are aggravated and prolonged by it. Many physicians are satisfied with making a single examination, and when the secretion is found to contain little or no pus, to call it negative. But if such a case be re-examined two or three times an increasing amount of pus will be found, and as treatment is continued a still greater amount will be secured. I believe that it is most important that these low percentage cases receive proper treatment and not consider the pus found to be due to traumatism of the prostate, as some would have us believe. The papers in this symposium have been very gratifying to me, and the attendance has been very pleasing as well, showing the interest the subject has for all medical men.

DOCTOR PLAYER (closing)—I wish to express my thanks to those who have discussed the paper. It is gratifying to know that their opinions coincide very closely with my conclusions.

Dr. McChesney raised the question as to the possibility of a quicker method of diagnosing prostatitis. I agree

with him that it is oftentimes difficult for a patient to return to the office for massage on four consecutive days. It is also expensive for the patient, but I am sure any urologist would be only too glad to make a nominal fee according to the means of the patient.

The glass tests are not satisfactory in themselves and I know of no other means at present other than prostatic massage and microscopic study of the secretion obtained which will give us positive data. McChesney's suggestion, however, is worthy of consideration.

CONSIDERATION OF PROGRESSIVE MUSCULAR DYSTROPHY WITH PSEUDO-HYPERTROPHY FROM AN ENDOCRINE STANDPOINT

By CLIFFORD WRIGHT, M. D., *Los Angeles*

Dysfunction of the pituitary gland considered etiologically important.

Recent literature and clinical evidence commented upon.

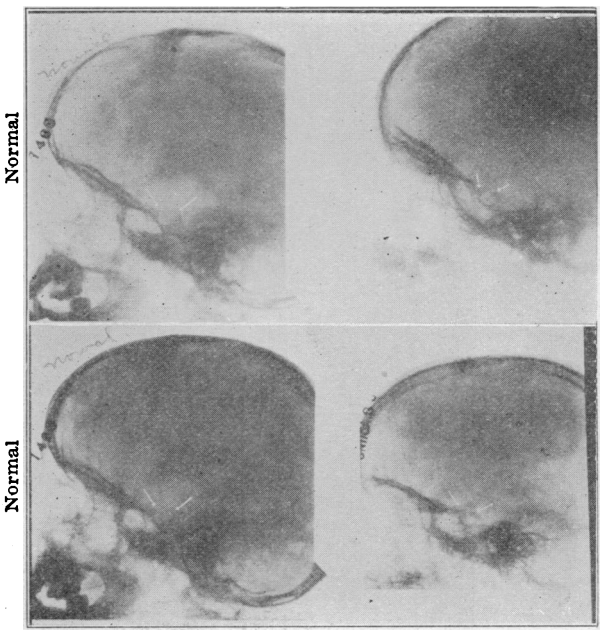
DISCUSSED *by H. Lisser, San Francisco; H. Douglas Eaton, Los Angeles; Edward N. Reed, Los Angeles.*

WHEN the earlier investigators of progressive muscular dystrophy discovered that there was no evidence of pathology changes in the brain and central nervous system, it became necessary to look further for the etiology of this interesting, yet quite irregular group of muscle disturbances. That they are endocrinopathies, probably pluri-glandular, seems borne out by the frequent association with other glandular disturbances, as Grave's disease; Addison's disease; acromegaly; and myxedema, and that many cases show pigmentation; vitiligo; hypo-glycemia; asthenia, and many other endocrine symptoms. Several cases have shown spontaneous cure at puberty, probably through some action of the gonads or other endocrines.

The pituitary gland, particularly the anterior lobe, has a very marked effect on the skeletal growth; muscle development and the maintenance of muscle tone and any disturbance of these may depend on some pituitary condition. I have had a series of nineteen cases of progressive muscular dystrophy with pseudo-hypertrophy, and it is the association of these conditions with other symptoms of pituitary disease that will be considered here.

In the progressive muscular dystrophies due to the irregularity of muscle involvement, the course of the disease; the absence or presence of contractures and other factors, a classification suitable to all cases is not easy.

Erb's classification into hypertrophic and atrophic forms has been usually followed, but one specifying a rapid and slow type is quite practical. While usually the earlier the condition starts the more rapidly progressive it is, this is not always so. One of my untreated patients, 9 years old, who has been affected six years, is practically bedridden; one at 12 who has been sick since 3 years of age, and one 15 who has had paralysis since 2 years of age, show slower progress of the paralysis. Heredity must play a part in this disorder, for in some instances several generations of the same family have shown some form of the disease. In 1916, Timme of New York reported a series of fourteen cases extending through three generations in one family. Twice in my series two brothers were affected, and



Sella turcica in each instance smaller than normal.

the great-grandmother of another patient and her six sisters all developed the condition at about 50 years of age, and a daughter of one of these women was affected. Of my nineteen cases, twelve are boys and seven are girls.

The usual tendency of the disease is to progress to complete invalidism showing exacerbations lasting from one to several weeks, when the patient shows more active symptoms and frequently is bedridden. These increase in severity and duration, as well as frequency, and death often comes at 16 to 18 years in the earlier cases, while the slower cases continue on to old age. Death may be caused by some intercurrent condition or from involvement of the respiratory or cardiac centers.

SYMPTOMATOLOGY

At first it is noticed that the child is clumsy, falls frequently, and is unable to walk up or down stairs. Later the typical waddling gait appears, and after falling, the child, in rising, will crawl up its own legs. The legs are usually first affected and show the typical pseudo-hypertrophy of the calf muscles, with atrophy of the shoulder girdle. Knee-jerks are absent; the paralysis is irregular. In no cases have I seen facial involvement. One has atrophy of the thenar and hypothenar eminences. Atrophy usually follows the false hypertrophy. Contractures are frequent and varied. Those of the heel cord are most frequent and prevent standing in many cases; others are equinovarus; hamstring contractures and scoliosis. Microscopical muscle changes are splitting of the muscle fibers, proliferation of nuclei, proliferation with hyperplasia of vasular tissues and deposit of connective tissue and fat. Sometimes muscle fibers have entirely disappeared and the muscle becomes pale. The electrical reactions are normal. The sphincters are intact. Sensibility is intact, also the special senses. With these, and most interesting from my standpoint, are the following pituitary symptoms: Large, round head; round face; spaced